DR-33 CHECKING SENSOR CALIBRATIONS

Perform Driveability Test 1, before proceeding.
This test must be performed with engine COLD.
1. If driveability problem exists only when engine is warm, proceed to Test 35.
2. Enter system into ``Read Sensor Values'' mode and start engine, then select ``Coolant Temperature.'' If display shows ambient temperature within 10°, turn engine Off. If display does not show ambient temperature within 10°, replace coolant sensor, then proceed to Test 45.
3. Check and repair or adjust any damage to throttle cables, then put diagnostic readout box into ``Read Sensor Voltage'' mode and select ``Throttle Position.''
4. If voltage is not 1.5 volts or less at idle, replace throttle position sensor, then proceed to Test 45. If voltage is 1.5 volts or less at idle, move throttle to wide open while observing voltmeter.
5. If voltage change was not smooth, replace throttle position sensor, then proceed to Test 45. If voltage change was smooth, check wide open throttle voltage.
6. If wide open throttle voltage is at least 3.5 volts, proceed to step 7. If wide open throttle voltage is not at least 3.5 volts, replace throttle position sensor, then proceed to Test 45.
7. Start engine while still reading throttle position voltage. Slowly increase engine speed to 2000 RPM while observing display. If voltage did not increase with engine speed, replace throttle position sensor, then proceed to Test 45. If voltage did increase with engine speed, let engine return to idle and select ``Minimum Throttle'' on diagnostic readout box.
8. If more than 1.5 volts is indicated, replace throttle position sensor, then proceed to Test 45. If less than 1.5 volts is indicated, turn the ignition Off.
9. Tee a vacuum gauge into the MAP sensor vacuum line. Start engine and put diagnostic readout box into ``Read Sensor Values'' mode and select ``MAP Gauge Reading'' and compare the display reading with the gauge reading.
10. If vacuum readings are within one inch of each other and the engine is a V8 engine, proceed to step 11. If vacuum readings are within one inch of each other and the engine is a 6 cylinder engine, proceed to Test 34. If vacuum readings are not within one inch of each other, proceed as follows:
    a. Turn ignition Off and remove vacuum gauge from MAP sensor line. Disconnect vacuum hose from MAP sensor and connect an auxiliary vacuum source to MAP sensor.
    b. Turn ignition On, select ``MAP Sensor Voltage'' and apply five inches of vacuum to MAP sensor. Record voltage displayed, then slowly increase vacuum to 20 inches and observe voltage.
    c. If voltage decrease is erratic, replace MAP sensor, then proceed to Test 45. If voltage decrease was not erratic, record display at 20 inches of vacuum.
    d. Subtract voltage at 20 inches from voltage at 5 inches. If difference is 2.3---2.9 volts, repair vacuum line to MAP sensor for restriction, then proceed to Test 45. If difference is not 2.3---2.9 volts, replace MAP sensor, then proceed to Test 45.
11. With engine cold, put diagnostic readout box into ``Read Sensor Voltages'' mode and select ``Throttle Body Temperature Sensor.'' Start engine and observe display.
12. If display shows 4---5 volts, proceed to Test 34. If display does not show 4---5 volts, replace throttle body temperature sensor, then proceed to Test 45.